

Big Data and Official Statistics: From Opportunities to Strategies

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Back in 1987, economist and Nobel Prize laureate Robert Solow famously said *"You can see the computer age everywhere but in the productivity statistics."* About a generation and a technological revolution later, the same could be said about the Big Data age and official statistics, especially in developing countries. And yet, sooner or later, Big Data will affect the work of national statistical offices and systems (NSOS) in ways—good or bad—that will be primarily determined by strategic decisions taken in the next few years. Big Data presents significant opportunities and risks for NSOS. The opportunity stems primarily from the so-called “Industrial Revolution of data”, underpinned by the spread of digital devices, increasingly so hand-held, and characterized by the exponential growth in the volume and variety of high-frequency data—cell-phone data, social media data, transaction data, online news and searches, etc.—that capture human actions, experiences, desires, intentions, and expectations. Concomitantly, innovation and improvements in computing techniques and power make it possible to glean actionable insights from these massive and complex data streams. On the demand side, all strata of societies are increasingly demanding more agile policymaking to cope with an increasingly volatile world, in an international context—the post-2015 development framework, the post-Busan development effectiveness agenda—that puts additional pressure on institutional producers of data to work differently. At the same time, many NSOS grapple with shortages of financial, technical and human resources and have a hard time producing basic statistics; some countries have not had a census in decades. Could unrealistic expectations and consequently ill-guided decisions divert precious resources away from the fundamental tasks of NSOS? Or could the Big Data opportunity be seized—and how?—to bridge the ‘data gap’ (some have spoken about “Africa’s statistical tragedy”) and accelerate the transformation of NSOS into 21st Century producers of statistical knowledge? The task may appear daunting in many cases, but one clearly emerging risk is the creation and widening of a new digital divide. Big Data is a game changer that requires thinking seriously about the full range of implications, potential applications and strategic options for NSOS. This paper will discuss existing uses of Big Data by NSOS, analyse key considerations and challenges and suggest avenues for the development of Big Data engagement strategies by NSOS.

Key Words: digital divide, statisticians